



This plan is for a two-storey gambrel roof barn 7.3, 9.1, or 11.6 m (24, 30 or 38 ft) in width. It can be built any length in multiples of 2.4 m (8 ft), up to a maximum length determined on the plans, taking into consideration the width and wind velocity. A loft area provides overhead storage for hay and bedding.

CONSTRUCTION. The exterior walls of this structure can be either stud wall or pole frame construction. Typically, pole frame construction is employed, using 150mm x 150mm (6" by 6") pressure

treated wood poles on concrete footings. Exterior wall plates notched into the tops of the poles support the ceiling joists and roof rafters. These ceiling joists are also supported near the building centerline by a beam and posts typically at the front of the box stalls. The plan shows how to lap joists at mid-length and stagger the joints of the exterior wall plates to take advantage of the increased bending strength of members that are continued over supports.

COMPLETE INSTRUCTIONS

Canada Plan Service, an inter-provincial organization, promotes the transfer of technology through factsheets, design aids, and construction drawings that show how to plan and build modern farm structures and equipment.

For more information, contact your provincial agricultural engineer or extension advisor.

STORAGE LOFT. Bales can be lifted by bale-elevator through a sliding door at each end-wall. A floor hatch and inside ladder give access for putting down hay and bedding. The roof is the traditional gambrel arch, a popular and economical way to build hay and bedding storage overhead. In winter, be careful to leave a deep layer of dry hay or bedding over the entire loft floor to insulate the warm stable below.

VENTILATION. The specifics of a ventilation system are not included in this plan. However, ventilation is an important part of the construction. Many 9000 series plans cover the issues of ventilation, including plan 9700.

CONCRETE FOUNDATION. Pole construction is faster and cheaper, but some builders still prefer the traditional concrete foundation and stud walls optional in this plan. Also, some situations are more favourable to a concrete foundation and stud wall design such as in areas with shallow soil over bedrock.

WIND BRACING. Diaphragm bracing is required. For effective diaphragm action, each panel of roof and wall cladding must be connected along all four edges to adjacent framing and cladding. This makes the entire building work like a rigid box to resist wind forces. The plan gives details of the extra cladding and framing connections necessary to make an effective roof/endwall diaphragm wind-bracing system.